ALLOY-SEARCH

ALLOY-SEARCH DATASHEET — 2.4967 / 2.4964 - Alloy 25 - Annealed

DESCRIPTION

2.4967 – 2.4964 - Alloy 25 is a cobalt-nickel-chromium superalloy designed for use in corrosive environments and commonly used in medical applications like implants. It possesses high tensile strength and good corrosion resistance and if the hardness is <35HRC it is suitable for petrochemical applications use in H2S- / Sulfur containing environments in oil and gas production per NACE MR0103 / NACE MR01075.

APPLICABLE STANDARDS

UNS R30605
DIN 2.4967 / 2.4964
EN-ISO CoCr20W15Ni10 / 4566 / 5832-5
AFNOR KC20WN / CO-PH4101
SAE AMS 5759 / 5537
BS HR 40 / HR 240 / 2HR 40
ASTM F90-14 / ASTM F1091
L-605 / Stellite 25 / MA25 / Alacrite XSH
B50A460 / B50T26A / Conicro 5010 W
NACE MR0175 / ISO 15156-3
Other standards available upon request

CHEMICAL COMPOSITION*

Element	C	Mn	Si	P	S	Cr	Ni	W	Fe	Co
Min %	0.05	1.00	-	-	-	19.00	9.00	14.00	-	-
Max %	0.15	2.00	0.40	0.040	0.030	21.00	11.00	16.00	3.00	Balance

*Per ASTM F-90-14.

MECHANICAL PROPERTIES*

Property	Minimum
UTS	860 Mpa
Rp0.2	310 Mpa
Elongation % in 4D	30%
Elastic Module	226 GPa
Hardness	248 HB.

*Per ASTM F90-14, Annealed Condition at Room Temperature.

TYPICAL PRODUCTS & USAGE

(Medical) Wire / Plate
Bolts/Flanges
Powder (Additive Manufacturing)
Medical & Marine Sectors
Petrochemical Corrosive Environments
Elevated Temperatures

MATERIAL APPLICATION

Alloy 25 is a superalloy available in annealed and hardened condition, where the hardening treatment (cold working) elevates the Rp0,2 to >760 Mpa and the UTS to >1250 Mpa but trades off on elasticity. It is commonly used in marine / petrochemical environments due to its' superior corrosion resistance and maintains it's properties very well under elevated temperatures up to 1100*C. Due to it's biocompatibility, it also sees a primary use in the medical field for example for hip implants or for surgical fixation wires.

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